1: Conzemius M-4, 5 (1921) 1932
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and rabbits. The raccoon, the coati or pisote, the weasel, the skunk, and the kinkajou are met with in the forests and the otter exists in all the streams.

Alligators and a small species of crocodile infest the rivers, lagoons, and swamps. Several varieties of river turtles or tortoises occur, while the valued hawk's bill, the green turtle, and the loggerhead are caught in the sea. The largest lizards are the iguanas, which occur in several eatable varieties. Poisonous and harmless snakes are numerous.

Man-eating sharks and sawfishes are found in the sea and in the lower course of the streams.

The "john crow" or turkey buzzard is a useful scavenger. During the winter months many of the common North American birds arrive as immigrants and spend the cold season in this mild climate. Guans, curassows, mountain hens, wild ducks, and pigeons are esteemed as food. Trogons, orioles, toucans, tanagers, macaws, parrots, parrakeets, and humming birds make themselves conspicuous by their plumage or by their song. Flamingos, white egrets, and herons are found chiefly around the lagoons and swamps.

The mosquitoes are the propagators of malaria, while red bugs, ticks, cockroaches, jiggers, sandflies, and screw worms are largely responsible for the prevailing skin troubles.

INHABITANTS.—The humid tropical climate, combined with the jungle vegetation, have retarded settlement and the building up of a dense population. The bulk of the inhabitants of the Mosquito Coast are found along the seashore and on the lower part of the larger rivers.

Besides the *Miskito* and *Sumu*, with whom the present monograph will deal, two other Indian tribes inhabit the Mosquito Coast, the *Paya* and *Rama*. The former live in Honduras between Rio Patuca and Rio Sico. Their number is estimated at about 700 and they are dying out rapidly (vide Conzemius, b). The Rama tribe, the bulk of which lives on Rama Key in Bluefields Lagoon, numbers only about 200. Its language is of Chibcha stock and is closely allied to those spoken by the aborigines of Costa Rica, Panama, Colombia, and northern Ecuador (vide Conzemius, c). The western portion of the Mosquito Coast was formerly occupied by the *Matagalpa*, whose language has been extinct for nearly half a century; a dialect of it is still spoken to this day in the villages of Cacaopera and Lislique (Salvador). A number of other tribes have been reported from the country under consideration in former days, but as they have been extinct for some time it has been impossible to classify them. Some of the tribal designations applied by the early authors are merely derived from the rivers upon which the tribes lived.

From Rio Tinto northward along the sea and lagoons live the so-called *Black Carib* or *Garif*. These are the descendants of the

1: Conzemius M-4, 5 (1921) 1932
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MANATEE SPEARING.—A similar spear, but with a point having not more than 2 inches in length and provided with only one or two barbs, is used to catch the manatee or sea cow (*Trichechus* sp.). The staff and float are identical as in the fish spear, but the line is thicker and stronger, for the manatee is a large and powerful animal. Dampier (I, 35–36) gives an account of the method practiced by the Miskito to secure this large mammal; it is still done so in our days. The Indians go after the manatee during the early morning when it grazes on the banks of the rivers and lagoons. The canoe is sometimes covered with branches or bushes, giving the appearance of a floating tree or island. When speared, the manatee makes off at a great speed, followed by the Indians, who can ascertain the direction which it takes from the float rippling the surface of the water. They manage to seize the latter and tie the distal end of the line to the bow of the boat. Gradually they advance toward the animal, hauling in the cord as they proceed. But the victim, seeing or hearing the craft, makes away a second time, dragging behind it the canoe with the Indians, at no little risk to the latter. Sometimes a second harpoon is driven into it. Finally the manatee is totally exhausted; the Indians then approach and kill it with their machetes or with sticks and then haul it into their small craft. As the manatee may weigh from 500 to 600 pounds, this is no easy matter. Both Indians get in the water and, holding onto the sides of their boat, they tilt it over so as to swamp it, whereupon they push it under their prize. Then the water is quickly bailed out of the canoe with the aid of a large calabash and the craft gradually rises. When all the water has been bailed out both men get in again and triumphantly paddle home.

TURTLE SPEARING.—The harpoon (*silak*) used for spearing turtle is not provided with a float, but it has a cord measuring up to 30 fathoms in length, the distal end of which is attached to the bow of the boat. The shaft or staff is of pejivalle wood, or of some wild species of palm, known by the Miskito names *apo* and *rdûwa;* the cord is tied firmly to it, for it does not float. This staff is from 2 to 3 inches thick and tapers gradually to a point at the rear end. An iron or steel point is inserted in the other extremity and an iron band is fitted around, in order to prevent the wood from splitting upon striking the turtle, for the harpoon is thown with great force. The point or head, locally called "peg" (*silak*), is triangular in section; it is single barbed at each one of the three lateral edges. Its length is only from 1½ to 2 inches, which fact enables it to get a good hold on the hard carapace of the turtle and at the same time not enter far enough to kill it. The Indians endeavor to approach either behind or directly in front of the turtle, as it does not see well straight ahead. When it comes to the surface to breathe, which takes place at intervals of about 20 minutes, the spear is thrown into the air in such a

1: Conzemius M-4, 5 (1921) 1932
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●225 manner as to fall vertically onto and thus pierce the tough shell of the turtle. If thrown obliquely it would glance off the smooth carapace. Upon being struck the turtle disappears in the water, dragging the long line with the boat along, but after a while it becomes exhausted by its struggle. The boat is swamped and placed under the turtle to haul it in, for the latter may weigh up to several hundred pounds. By shoving the canoe from one side to the other the Indians throw out enough water to allow it to float, while the remainder is bailed out with a calabash. After the extraction of the harpoon head, the wound is stopped with cloth; otherwise the turtle may die. These animals are also harpooned at night, their presence being indicated by the line of phosphorescent light they produce in the water. A smaller implement is employed for young sea turtles and for the different smaller varieties met with in the rivers.

TURTLE NETS.—The Miskito of Tasbapauni (Pearl Lagoon) also employ large turtle nets, from 50 to 100 fathoms in length and from 6 to 8 feet in width, made of imported twine. These nets have been introduced into the country by the fishermen from the Cayman Islands and the Bay Islands. These turtle nets have very large meshes; they are anchored at the bottom and floated with buoys placed along the margin. Wooden turtle decoys are also attached to them in order to attract the prize, which becomes entangled therein and is then easily caught. Sometimes turtles die in the nets, being unable to rise to the surface to breathe.

OTHER METHODS OF CATCHING TURTLES.—Sea turtles are also caught at night by the Indians, when they come to the shore to dig a hole in the sand to deposit their eggs therein. They then carefully cover up the hole again, and occasionally even deposit some leaves or driftwood on the spot, so as to prevent detection. The Indians are very clever in discovering the eggs, being guided by indications on the surface sand. They poke suspected places with pointed sticks and by the moist particles adhering to the latter they immediately perceive when an egg has been pierced. Upon withdrawing the stick they examine and smell it, and having come to a satisfactory conclusion they turn up the sand. The Indian will also run after the turtle, overhaul it, and turn it on its back so as to render it helpless.

The green sea turtle (M.: *wli*, *lih*; S.: *wili*) is considered a great delicacy while the loggerhead and the hawk's-bill are also eaten. The latter species furnishes the valuable shell. Turtles are penned in [417] stockades or "crawls,"[45] made by driving heavy mangrove posts in the shallow sea water, until needed for food.

Several species of tortoises, of which the largest is the bocatora (M.: *kuswa*[46]; S.: *kowa*, *kuwa*) are also greatly esteemed as food.

[45] From the Spanish corral, "cattle pen."

[46] M. W. (312) gives this name in the form cushwaw.

1: Conzemius M-4, 5 (1921) 1932
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They are caught with the hook or by diving after them; some Indians will also catch the sea turtles in this manner and bring them up in their hands, but this feat is attended with danger, from bites and sharp coral. The bocatora tortoise is speckled black and yellow and is found in the larger rivers only. It lays about 20 round eggs in the sand, silt, or even in stiff earth; the eggs are inclosed in a rough calcareous parchment and are considered a great delicacy.

LANCES.—Two varieties of long spears, with fixed points, are employed for striking fish. They are not thrown, but kept in the hand while striking. These implements are found chiefly among the river Indians, Miskito as well as Sumu. The thin, strong staff, which may be from 10 to 15 feet in length, is made from the stem of a tree called by the Ladinos "cacao" (M.: *sakalpihni;* S.: *babasnak*). Of these two implements the more common one (M.: *sihnak;* S.: *suksuk*) has a harpoonlike point, similar to that of the javelin or throwing spear. The other one (M. and S.: *daka*) is provided with a pointed piece of thick wire or some other metal, which looks like a nail; for that reason it is called "clavo" by the Ladinos, who also use it in fishing.

FISHHOOKS.—Fishing with the hook (M.: *kyul;* T., P.: *kuyul;* U.: *simin*) is done chiefly by the women, children, and old men. The line is made of silk-grass fiber (*Bromelia* sp.) and is dyed black with vegetable juices, so as to render it less conspicuous. The hooks are of foreign manufacture but in former days crooked bones were used for the purpose. The Indians bait them with worms, spiders, grasshoppers, or fruits (guavas, wild figs).

At certain times of the year when the fruits of the wild fig or of other trees growing along the edge of the river begin to drop, the Indians fish without any bait at all. They flick and cast their long line about, lashing the surface of the water, and letting it sink, presently raising it with a peculiar movement of the wrist. This noise is regarded by the fish as resulting from the dropping of overhanging fruits and they will greedily snap after them and then be caught by the hook.

FISHING NETS.—A small fishing net (M.: *ilis, tan;* T.: *wilino;* P.: *dua;* U.: *yano*), made of silk-grass fiber, is used by both Miskito and Sumu. With its aid they close the mouth of narrow creeks, in order to catch the fish trying to enter the main river. Wickham (b: 238; c: 203) already mentions the use of drag nets among the Ulwa of Rio Escondido; the Indians employed it in low water in the pools scattered among the bowlders or rocks in the rapids and falls.

The cast net and the seine have also been introduced recently among the Miskito. The former especially is becoming popular. Having the folded net in his hand, the Indian throws it like a lasso upon the water in such a manner that by a single cast it becomes suspended almost to its whole width, surprising and catching the

1: Conzemius M-4, 5 (1921) 1932
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226 At night torchlights are used to attract the fish and induce them to rise to the surface, where they are killed by a stroke with the machete; the latter weapon is also used to chop the "sleeping" fishes, which are easily detected with the torches.

Along the river banks and among the rocks the Indians also "feel" for certain fishes and for crustacea.

[262] CATCHING ALLIGATORS.—The tail part of young alligators and crocodiles is also occasionally eaten. These ugly reptiles are caught with
● 225 the aid of large hooks. Young (61) gives the following account of the manner practiced by the Sumu to catch these repulsive creatures but, needless to say, this applies only to young specimens: "A Sumu Indian, when he sees an alligator near the banks of the river, will boldly swim under water, carrying a native-manufactured rope with a noose in it, until he reaches the creature; he will then dexterously affix the noose to its leg; his companions at the same moment, having hold of the other end of the rope, pull it vigorously, and the alligator is speedily drawn out and despatched."

226 CRUSTACEA AND MOLLUSKS.—Lobsters, crabs, and mollusks (conchs, large whelks, mussels, oysters) are also gathered by the women, and form an important item of food. In the larger lagoons two kinds of edible oysters are common; the smaller one, or mangrove oyster, attaches itself to the roots of the mangrove tree, while the larger one occurs in banks in certain parts of the lagoons.

172 A small bivalve mollusk, known locally as "cockle" (M. and S.: *ähi*), appears to have played in former days an enormous rôle in the food supply. A number of refuse heaps, up to 20 feet in height, consisting of cockle shells intermingled with fragments of domestic utensils of stone, bone, or pottery, have been discovered on the western shore of Bluefields Lagoon. Two of such *tumuli* were examined by the writer on Cucra Point in 1921. They consisted nearly exclusively of the above-mentioned small cockle shell, which mollusk is found in the shallow water of the lagoon. Oyster shells were rare, although extensive oyster banks exist also in certain parts of the Bluefields Lagoon. These shell mounds (shell heaps, kitchen middens, kitchen débris), called also by the Danish word *kjøkkenmødding*, indicate undoubtedly old dwelling sites; from their great size it is evident that long periods of time must have been required for their accumulation. A number of them were also found at the site of Bluefields and likewise a little to the north; they have been carried away to "metal" the streets of that town. See also Bell (a: 260; b: 18), Wickham (b: 251–252), and Spinden (532–533).

226 FISHING CHARMS.—Certain charms are said to be very efficacious
777 at fishing. Stones found in the stomach of fishes are highly valued, as their possessor will have good luck in catching that particular species of fish. Heads and spines from the larger species are also

2: Kirchhoff E-4 (no date) 1948
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Harpoons with floats attached are used for large fish and for manatees, the latter being taken in the lagoons and at sea. Harpoons with long retrieving lines but without floats are used for sea turtles. The *Sumo* lasso young crocodiles.

Domesticated animals.—No early source mentions dogs, but they are now common. Pigs, sheep, goats, cattle, horses, and cats have been introduced. The people tame a great variety of wild birds and several species of mammals. The latter are even suckled by the women. Species of native bees are kept in hives near the houses.

Food preparation.—Food may be boiled, sometimes in coconut milk. Meat and fish are broiled or roasted in hot ashes, and fish may be fried in coconut oil. The *Paya* fry green pineapple. Salt is used as a condiment but rarely as a preservative. Sauces of red peppers, lime, and salt are made by the *Mosquito*. The *Paya* use chili as a sauce or as a substitute for other food. Tamales are made of manioc. Maize dough, sometimes soured (*Mosquito*), is wrapped in leaves and baked. This and manioc dough may be made into tortillas, an item introduced into the region only in recent years. Manioc is made into bread, which is baked in the open fire.

Numerous beverages are made of liana sap, maize, honey, green plantains, and the like. Some of these are made of a sour paste, which is diluted with water before it is eaten. Such food is usually carried while traveling. Alcoholic beverages are prepared in canoes (*Mosquito*) or log troughs (*Paya*) and stored in earthenware pots. Fermentation is hastened in various ways, notably by chewing uncooked or cooked maize or manioc and spitting it into the mixture.

Preserving and storage of food.—Fish is dried in the sun and meat is dried on a three-legged babracot. The *Mosquito* make a mixture of green bananas and pejibaye palm nuts which may be kept for 6 months or longer. It can be made into a beverage or baked as bread. The *Sumo* preserve boiled maize by steeping it in lye to remove the hull and then burying it. The *Sumo* also make up large parcels of maize or peeled bananas, which are placed in running water until partially fermented, then dried in the sun. Live turtles are kept in stockades in shallow water.

VILLAGES AND HOUSES

Mosquito villages (pl. 35, *bottom*) had between 100 and 500 inhabitants. *Sumo* villages appear to have been much smaller. Formerly, communal houses, called "palenques," had compartments for each family. Some were about 40 by 80 feet (about 12.5 by 25 m.); smaller communal houses were built by the *Mosquito*. *Sumo* houses had an elaborately carved central post. House plans were rectangular, the ends being rounded, elliptical (*Paya*), or circular (*Mosquito* of Honduras). At the present

3: Pijoan D-5 (ca. 1945) 1946
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MEAT FOODS

226 A very large share of food is obtained from the sea, the lagoons, and the rivers. Larger fish are caught by throwing a spear or javelin, smaller ones with hooks or nets. Previous to the introduction of steel, the Indians fashioned their spear heads from bamboo, which was easily cut into barbs. A cord is attached to the point whereas the shaft is a solid light wood. With this device they spear the carp-like snook and the tarpon. At night fish are attracted by the use of a pitch pine torch and are also speared; turtles are harpooned. Fish are sometimes caught by "poisoning" the water. For this purpose the Indians utilize several vines; usually one which has been identified as *Seriania inebrians*. The vine is crushed with flat stones to release the poisonous milky juice. A creek is temporarily dammed and at some distance above the dam the crushed plant is thrown into de water, the fish are quickly paralyzed and are then caught by the Indians. Large fish are easily harpooned when in this condition. Smaller fish are allowed to float away and recover when they reach unpolluted water. Bows and arrows are rarely used today for fishing purposes but near mining centers fish are often dynamited; this process is to be condemned since it destroys the majority of the smaller fish.

[225] The tails of young alligators and crocodiles are occasionally eaten. Lobsters, crabs, and mollusks form an important item of food. In general, the rivers and lagoons afford an ever present, easily obtainable source of food.

224 With muzzle loading and other equally out-of-date shotguns, the Indians hunt game. Spears, bows, and arrows are occasionally used but the blowgun is no longer used. Game is found in abundance along the margins of the rivers. Deer, Peccary, spider monkey and capuchin monkey, tapir, lizards and a variety of birds, including parrots, red-spoonbills, curasows, mountain hens, quail, partridge, pigeons and a number of wild ducks, are used for food. In addition to the wild game, the Indians raise and eat some domestic cattle, pigs and chikens. There is no lack of meat of one form of another. It is often preserved by drying and smoking it for several days over a dull fire, since the humidity is too high for sun drying. Salt is used sparingly by the Indians.

FOOD PREPARATION AND CONSUMPTION

373 Fire is a necessity for cooking, for without it the Indians would have to subsist on raw foods. Fire is produced by twirling a hardwood stick in a notch of wild cane. When smoke appears a piece of wild